

# Categorical Exclusion Determination

Bonneville Power Administration  
Department of Energy



**Proposed Action:** Eugene Region VHF Radio System Upgrades

**Project No.:** P01237

**Project Manager:** Ben Younce, TEPF-CSB-2; Rian Dustan, TTBP-DITT-2

**Location:** Lane, Douglas, Coos, and Curry counties, OR

**Categorical Exclusion Applied (from Subpart D, 10 C.F.R. Part 1021):** B1.19 Microwave, meteorological, and radio towers

**Description of the Proposed Action:** Bonneville Power Administration (BPA) is proposing to replace its aging VHF radio system at host facilities with a simple, modern, VHF two-way radio system in its Eugene VHF radio region. The project would help BPA meet its goals of safe facilities maintenance and operations, and uninterrupted power transmission.

Required by field personnel for communication with each other and with data control centers, the BPA two-way VHF radio system is being overhauled and updated. In the Eugene radio region, multiple sites have similar requirements in achieving modernization and system reinforcement. The replacement would help improve voice coverage across BPA's service area and is coordinated with similar efforts at many radio stations under BPA's "Mobile-REDI" project.

Specifically, BPA proposes to conduct the following activities in radio station and substation yards, on communications towers and within, or on the exterior of, existing buildings.

- Retrofit Radio Sites – Install racks and communications equipment that includes batteries (including vented lead-acid [VLA] and valve-regulated lead-acid [VRLA] batteries with spill-containment as needed), fuse panels, other electronics including network componentry, and power supply-supporting equipment and hardware. Upgrade AC power system circuitry. Make minor alterations to existing radio transmission line ports through building walls and/or add additional adjacent ports. Install or reinforce ice bridges (metal frames supporting transmission lines) from towers to building ports. Install interior and exterior grounding bars and lightning protection. Upgrade heating, ventilation, and air conditioning (HVAC) by installing HVAC equipment using minimally-invasive wall-mounted units. Ground all new equipment by installing metal grounding bars at building interior and exterior walls and manually digging 18 to 30-inch deep holes in the station yard to bond the bars to the existing grounding mat. Small repairs would also be made to the grounding mats where needed.
- Upgrade Tower Fall Protection – Install the MSA Latchways cable safety system on the vertical climbing path of communication towers. The cable would be anchored to the towers at the top and bottom by new support beams and attached along its length by a series of new brackets. Once installed, workers would use the system when climbing the

tower by attaching their harness to a specialized pulley which allows them to glide along the safety cable as they climb. Installation would require a line truck and two to three workers at the structure and one to two workers on the ground. Intermittent noise generation would occur from the use of hand tools to install the support beam and Latchways system and gear banging against the steel structures. Noise would occur over six to eight hours in a single day. Where needed, tower reinforcement would not require new ground disturbance.

- Install Backhaul Equipment – At locations where backhaul (radio communication infrastructure that transmits the field-originated VHF data back to the central data control centers) equipment would be installed in the buildings, the associated existing standard drum-style microwave antennas would remain in operation. The resultant microwave beampaths would have no impact to vegetation or land surface as topography and vegetation types allow for large clearance distances between these and the beam. Install microwave signal waveguide (metal conduit) from antennas to building ports, install microwave radios and connect them to the waveguide. Retire old equipment.
- Install Fronthaul Equipment – Install VHF radio repeaters in new or existing equipment racks. Replace and install three-inch-diameter, 20-foot-tall, “whip” (straight rod) antennas or microwave dishes. Where fronthaul (radio communication infrastructure that collects field two-way calls over VHF signal waves) equipment would be installed, the whip antennas would pose no impact to existing viewshed resources because they would be less visible than the tower frame at the viewshed level. There would be a replacement and/or addition of the final respective number of coax cable runs from the new antennas to the internal radio equipment. Retire old equipment.

BPA would perform abatement of existing hazardous materials (lead and asbestos) as needed before work begins at all sites. After installation, all equipment would be connected and tested. Any obsolete equipment would be removed and properly disposed of as needed.

The sites (with BPA reference codes) where VHF radio system upgrades are proposed and for which NEPA review would be completed under this CX, are listed here with main elements of the work described:

**Alvey Substation (ALVY), Lane County, OR:** Backhaul equipment activities would include the installation of a new VHF router and NMS term server and associated electronics and hardware in existing equipment racks. Fronthaul equipment activities would include the installation of a new Primary Voter and connection of the new equipment. No exterior communications work would be required.

**Cape Blanco Radio Site (CAPB), Curry County, OR:** Backhaul equipment activities would include the installation of a new VHF router and NMS terminal server and associated electronics and hardware in new equipment rack with ground bar, new battery and spill containment, and additional grounding for the ice bridge legs. Fronthaul equipment activities would include the installation of new whip antennas, new coax cable from the antennas, routing the cable into the communications building to connect with the new VHF system, and grounding the cable to the interior ground bar. New fall protection would be installed on the existing communication tower.

**Eugene Substation (EUGE), Lane County, OR:** Backhaul equipment activities would include the removal of the 900 MHz antenna #4 from the existing tower, and the LEDR radio and coax cable inside the communication building. Outside the building, the coax cable from the LEDR radio travels to the tower underground within a 4” conduit. The coax cable would be removed and

the conduit would be capped, sealed, and abandoned in place. There are no fronthaul activities proposed at this site.

**Lowell Butte Radio Site (LOBU), Lane County, OR:** Backhaul equipment activities would include the installation of a new VHF router and NMS terminal server and associated electronics and hardware in new equipment rack with ground bar. Remove nitrogen tanks and replace with a new dehydrator. Install ground bars beneath wave entry port both on interior and exterior of building. Ground cable to exterior ground bar. Install additional grounds for tower, tower ladder, wave guide ladder legs, and ice bridge posts. Fronthaul equipment activities would include the installation of new whip antenna, new coax cable from the antenna, routing the cable into the communications building to the rack where the new VHF system would be installed, connection to the communication network hardware, and grounding the new cable to the interior ground bar. New fall protection would be installed on the existing communication tower.

**Scott Mountain Radio Site (SCOT), Douglas County, OR:** Backhaul equipment activities would include the installation of a new VHF router and NMS terminal server and associated electronics and hardware in new equipment rack with ground bar. Install ground bars beneath wave entry port both on interior and exterior of building. Both would be connected to the exterior ground ring. Install additional grounds for ice bridge legs and tower ladders. Fronthaul equipment activities would include the installation of a new TX/RX VHF antenna, new coax cable from the antenna, routing the cable into the communications building to the rack where the new VHF radio would be installed, connection to the communication network hardware, and grounding the new cable to the interior ground bar. New fall protection would be installed on the existing communication tower.

**Wolf Mountain Radio Site (WOLF), Lane County, OR:** Backhaul equipment activities would include the installation of a new VHF router and NMS terminal server and associated electronics and hardware in new equipment rack with ground bar. Install exterior ground bars and additional grounds for tower, tower ladder, wave guide ladder legs, and ice bridge posts. Connect interior ground bar to the existing ground ring. Fronthaul equipment activities would include the installation of new VHF whip antennas, new coax cable from the antennas, routing the cable into the communications building to the rack where the new VHF radio would be installed, connection to the communication network hardware, and grounding the new cable to the interior ground bar. New fall protection would be installed on the existing communication tower.

**Findings:** In accordance with Section 1021.410(b) of the Department of Energy's (DOE) National Environmental Policy Act (NEPA) Regulations (57 FR 15144, Apr. 24, 1992, as amended at 61 FR 36221-36243, Jul. 9, 1996; 61 FR 64608, Dec. 6, 1996, 76 FR 63764, Nov. 14, 2011), BPA has determined that the proposed action:

- 1) fits within a class of actions listed in Appendix B of 10 CFR 1021, Subpart D (see attached Environmental Checklist);
- 2) does not present any extraordinary circumstances that may affect the significance of the environmental effects of the proposal; and
- 3) has not been segmented to meet the definition of a categorical exclusion.

Based on these determinations, BPA finds that the proposed action is categorically excluded from further NEPA review.

/s/ Nancy A. Wittpenn

Nancy A. Wittpenn

Environmental Protection Specialist

BECC:

N. Wittpenn – ECT-4

M. Colletti – EPR-4

H. Adams – LN-7

M. Connolly – LN-7

B. Younce – TEPF-CSB-2

R. Dustan – TTBP-DITT-2

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<https://portal.bud.bpa.gov/orgs/efw/KEC/tsrvcs/Projects/Mobile REGIONAL CX Eugene Region.docx>

# **Categorical Exclusion Environmental Checklist**

This checklist documents environmental considerations for the proposed project and explains why the project would not have the potential to cause significant impacts on environmentally sensitive resources and would meet other integral elements of the applied categorical exclusion.

**Proposed Action:** Eugene Region VHF Radio System Upgrades

## **Project Site Description**

The work would take place at existing BPA facilities that include control houses at substations; and buildings, towers, and supporting structures at radio stations. Work would occur in previously disturbed graveled facility yards. These facilities are located in a few counties in Oregon and are surrounded by forested landscapes in various stages of regrowth, or in more open rural areas outside the city of Eugene.

## **Evaluation of Potential Impacts to Environmental Resources**

### **1. Historic and Cultural Resources**

Potential for Significance: No

Explanation: A BPA archaeologist and BPA Historian reviewed the proposed activities at each location and determined that these activities do not have the potential to cause effects to historic properties.

### **2. Geology and Soils**

Potential for Significance: No

Explanation: All ground disturbance would be limited to previously disturbed graveled facility yards, mainly between the radio tower and the supporting building; and include up to 5 manually dug holes at each site to the depth of the grounding mat (18-30 inches) with small expansions for grounding mat repairs as needed.

### **3. Plants (including Federal/state special-status species and habitats)**

Potential for Significance: No

Explanation: All work would take place in graveled facility yards that are maintained to prevent plant growth.

### **4. Wildlife (including Federal/state special-status species and habitats)**

Potential for Significance: No with Conditions

Explanation: Work would be limited to the existing facilities and there would be only minimal potential disturbance to most wildlife in the vicinity from the noise generated directly at the site or the vehicular traffic to and from sites.

To address potential effects to Marbled Murrelet and Northern Spotted Owl—both listed as threatened under the Endangered Species Act—BPA completed informal Section 7 consultation with the U.S. Fish and Wildlife Service, who concurred on March 19, 2019, that the proposed action may affect, but not likely to adversely affect, both species at some sites. Because BPA would not remove trees or vegetation, there would be no effect to designated Critical Habitat. To avoid and minimize potential effects, BPA would schedule work during the timeframes specified for those sites.

Notes:

- For projects proposed at Cape Blanco, Scott Mountain, and Wolf Mountain, the following avoidance and minimization measures apply:

The Northern Spotted Owl is sensitive to noise during the critical breeding period (March 1 – July 15) when a flush response may result in nest abandonment. To eliminate the potential for disturbance to nesting owls during the critical nesting period, Bonneville would schedule work after July 15 and before March 1.

The Marbled Murrelet critical nesting period is April 1 to August 5. The late nesting season runs until September 15. To avoid and minimize disturbance and disruption during these periods, Bonneville would schedule no more than three days of construction during the critical-nesting breeding period (April 1 to August 5). In addition for all work between April 1 and September 15, Bonneville would implement daily timing restrictions to ensure that work occurs no earlier than two hours after dawn and no later than two hours before dusk.

## **5. Water Bodies, Floodplains, and Fish (including Federal/state special-status species, ESUs, and habitats)**

Potential for Significance: No

Explanation: Ground disturbance would be small and localized within existing graveled yards at all facilities. The potential for erosion would be very low to non-existent because sites are relatively level and best management practices would be used to cover and control excavated soil on-site, limiting soil loss. None of the facilities are in a floodplain nor are they in close proximity to water bodies.

## **6. Wetlands**

Potential for Significance: No

Explanation: Work would take place within existing graveled yards with no potential to affect wetlands.

## **7. Groundwater and Aquifers**

Potential for Significance: No

Explanation: Disturbance of facility ground would be minor and would not reach below the grounding mat at around 18-30 inches below ground surface, depending on the site.

## **8. Land Use and Specially-Designated Areas**

Potential for Significance: No

Explanation: The work would take place at existing facilities and new equipment would be similar in nature and not out of character with new or existing equipment being replaced. No change in land use would occur.

## 9. Visual Quality

Potential for Significance: No

Explanation: While there would be slight changes in the types of equipment being removed and replaced, these changes would not constitute a substantial change in visual quality.

## 10. Air Quality

Potential for Significance: No

Explanation: Minor, localized, and temporary generation of emissions and dust from increased vehicular traffic and ground disturbance would occur from project activities.

## 11. Noise

Potential for Significance: No

Explanation: Minor intermittent noise from construction activities would occur from project activities.

Notes:

- See Wildlife section above.

## 12. Human Health and Safety

Potential for Significance: No

Explanation: Minor exposure to asbestos or lead could occur during the described work. Contractors performing the work would have a current Class III Competent Person certification for asbestos operations and maintenance, and apply BPA-approved mitigation measures when cutting/drilling through potentially lead-or-asbestos-containing materials. If BPA performs any of the work, BPA Work Standards and the Safety and Health Program Handbook for such hazards would be followed.

VLA and VRLA batteries would be handled during replacement. VLA batteries would be coupled with hydrogen detectors to monitor levels of the gas inside communication buildings. Workers would take all necessary handling precautions to prevent spill or leakage. Spills or leakage would be neutralized using standard measures. Old batteries would be packed and shipped according to BPA Pollution Prevention and Abatement requirements.

A Pollution Abatement Clearance (PAC) would be completed for any disturbed yard material needing disposal off-site.

### **Evaluation of Other Integral Elements**

The proposed project would also meet conditions that are integral elements of the categorical exclusion. The project would not:

**Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders.**

Explanation: see above Human Health and Safety

**Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators) that are not otherwise categorically excluded.**

Explanation: N/A

**Disturb hazardous substances, pollutants, contaminants, or CERCLA excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases.**

Explanation: see above Human Health and Safety

**Involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those of the Department of Agriculture, the Environmental Protection Agency, and the National Institutes of Health.**

Explanation: N/A

#### **Landowner Notification, Involvement, or Coordination**

Description: At sites where coordination is needed, BPA Realty would contact the respective agencies or landowners per any agreed-upon terms and acquire permission as needed for the described work.

Based on the foregoing, this proposed project does not have the potential to cause significant impacts to any environmentally sensitive resource.

Signed: /s/ Nancy A. Wittpenn February 1, 2021  
Nancy A. Wittpenn, ECT-4 Date  
Environmental Protection Specialist